

IN THE CLAIMS

Claim 1 (currently amended): Apparatus for stacking items, comprising:

- (a) a first conveyor receiving the items and controlling item flow into the apparatus, with the first conveyor having a discharge end;
- (b) a second conveyor having an infeed end receiving the items from the discharge end of the first conveyor and having a discharge end;
- (c) a stacker conveyor having an infeed end receiving the items from the discharge end of the second conveyor;
- (d) a plurality of moving stacker shelves receiving the items from the stacker conveyor;
- (e) a shifting mechanism for moving the stacker conveyor adjacent one of the plurality of moving stacker shelves, with the discharge end of the second conveyor moving with the infeed end of the stack conveyor such that angular relationships between the second conveyor and the first conveyor and between the second conveyor and the stacker conveyor change with movement of the stacker conveyor; and
- (f) a stack unloader.

Claim 2 (currently amended): The apparatus of claim 1, wherein the first conveyor further comprises two endless, vertically spaced, parallel belts gripping the items therebetween there-between.

Claim 3 (currently amended): The apparatus of claim 1, wherein the second conveyor further comprises a pair of parallel, spaced apart belts supporting the items sitting thereon.

Claim 4 (original): The apparatus of claim 3, wherein the spacing between the belts is adjustable.

Claim 5 (currently amended): The apparatus of claim 4, wherein the stacker conveyor further comprises a pair of parallel, spaced apart belts supporting the items sitting thereon.

Claim 6 (original): The apparatus of claim 5, wherein the spacing between the belts is adjustable.

Claim 7 (original): The apparatus of claim 1, wherein the stacker conveyor adjusts for multiple sizes and pack patterns of items.

Claim 8 (original): The apparatus of claim 1, wherein the stacker conveyor further comprises an anti-scuffing mechanism.

Claim 9 (original): The apparatus of claim 1, wherein the stacker shelves retract sequentially to stack the items.

Claim 10 (original): The apparatus of claim 1, further comprising a jam clearance mechanism.

Claim 11 (currently amended): The apparatus of claim 3, wherein the apparatus further comprises a jam clearance mechanism that separates the pair of parallel, spaced apart belts of the second conveyor, allowing product to fall out of the apparatus.

Claim 12 (original): The apparatus of claim 11, further comprising a clean-out conveyor upon which the cleared product falls.

Claim 13 (original): The apparatus of claim 11, further comprising a motor separating the spaced apart belts.

Claim 14 (original): The apparatus of claim 1, wherein the second conveyor runs faster than the first conveyor, thereby creating a gap between each item.

Claim 15 (original): The apparatus of claim 3, wherein the spaced apart belts permit incorrectly oriented items to drop between the spaced apart belts.

Claim 16 (currently amended): The apparatus of claim 1, ~~wherein the second conveyor further comprises comprising hold-down rails in a spaced parallel relation to the second conveyor~~ engaging the items; and ~~the stacker conveyor further comprises~~ hold-down rollers engaging the items ~~in a spaced relation to the stacker conveyor, with the items located between the hold-down rails and the second conveyor and hold-down rollers and the stacker conveyor.~~

Claim 17 (original): The apparatus of claim 1, further comprising an overflow mechanism permitting items to flow out of the apparatus without being stacked when there is a back-up in downstream equipment.

Claim 18 (currently amended): The apparatus of claim 17, wherein the overflow apparatus further comprises a movable backstop on the stacker conveyor, ~~with the backstop being movable between an overflow position and a normal position, with the backstop in the normal position extending outwardly from the stacker conveyor stopping the items transferred on the stack conveyor, with the backstop in the overflow position not~~

interfering with the items transferred on the stack conveyor.

Claim 19 (original): The apparatus of claim 11, wherein the stacker conveyor further comprises a pair of spaced apart belts supporting the items, wherein the jam clearance mechanism further comprises a mechanism to separate the spaced apart belts of the stacker conveyor, and wherein the jam clearance mechanism further comprises a mechanism to separate the stacker shelves.

Claim 20 (original): A method for stacking incoming items, comprising the steps of:

- (a) receiving the items on a first conveyor;
- (b) transferring the items to a second conveyor;
- (c) transferring the items to a stacker conveyor;
- (d) positioning the stacker conveyor adjacent one of a plurality of moving stacker shelves;
- (e) transferring an item to one of the plurality of moving stacker shelves;
- (f) retracting each stacker shelf to stack items in a stacking area; and
- (g) unloading the stacked items from the stacking area.

Claim 21 (original): The method of claim 20, further comprising the step of repeating steps (d) and (e) when the stacking area is full of items.

Claim 22 (original): The method of claim 20, wherein step (d) further comprises moving the stacker conveyor in a direction opposite that of the moving stacker shelves, then tracking the motion of a stacker shelf as the item is transferred from the stacker conveyor to the moving stacker shelf.

Claim 23 (original): The method of claim 20, wherein step (f) is disabled when the stacking area is full of items.

Claim 24 (original): The method of claim 20, wherein step (g) further comprises unloading the stacked items out of the stacking area with a stack unloader and returning the stack unloader above items being stacked.

Claim 25 (original): The method of claim 20, further comprising a step of stopping the first conveyor when the stacking area and the plurality of moving stacker shelves are full of items.

Claim 26 (original): The method of claim 20, wherein the second conveyor runs faster than the first conveyor, thereby creating a gap between the items.

Claim 27 (previously presented): Apparatus for stacking items, comprising:

- (a) a receiving mechanism for receiving incoming items;
- (b) a stacking area wherein the items are stacked one upon the other;
- (c) a stacking mechanism for receiving items from the receiving mechanism and stacking the items in the stacking area;
- (d) a buffering mechanism for receiving incoming items when the stacking area is full; and
- (e) a stack unloading mechanism;
- (f) wherein the stacking mechanism further comprises a plurality of moving stacker shelves, wherein the receiving mechanism further comprises a conveyor moving in the direction of motion of the moving stacker shelves and tracking the motion of the moving stacker shelves, and wherein the buffering mechanism further comprises the plurality of moving stacker shelves and the conveyor tracking the motion of the moving stacker shelves.

Claims 28-30 (canceled).

Claim 31 (previously presented): The apparatus of claim 27, wherein the conveyor moves in a direction opposite to the direction of motion of the moving stacker shelves, then tracks the motion of the moving stacker shelves.

Claim 32 (previously presented): The apparatus of claim 27, wherein the moving stacker shelves retract sequentially to stack items.

Claims 33-36 (canceled).

Claim 37 (previously presented): Apparatus for stacking incoming items, comprising:

- (a) a set of recycling stacker shelves moving in a substantially vertical path;
- (b) a conveyor having a receiving end for receiving incoming items and a depositing end for transferring the items one at a time to one of the set of recycling stacker shelves;
- (c) wherein the set of recycling stacker shelves retract to stack the items in a stacking area; and
- (d) wherein the conveyor's depositing end moves substantially vertically to track the motion of the set of recycling stacker shelves.

Claim 38 (previously presented): The apparatus of claim 37, further comprising a stack unloader.

Claim 39 (previously presented): The apparatus of claim 37, further comprising a jam clearance mechanism.

Claim 40 (previously presented): The apparatus of claim 37, further comprising an overflow mechanism.

Claim 41 (canceled).